

end of the sperm-duct seems to be represented in his figures as with an intracellular duct, while the region immediately succeeding the sperm-duct funnel would appear to possess an undoubtedly intercellular duct. This condition, it is to be noted, is precisely that of *Trichodrilus*.

Although, on the above analysis, it would seem that the differences between the two sets of individuals does not affect characters of importance, it is clear to anyone examining the actual structures concerned that a line can easily be drawn between them. Such as it is, I have attempted to put the difference into words. A glance, however, at the sections themselves renders impossible any confusion between the two varieties; I may remark, without further detail, that this also applies to the spermathecae. I cannot, however, find other reasons for dividing the British *Trichodrilus* into two species; nor, on the other hand, am I in a position to assert that such do not exist. It is just possible, but not likely, that the last-described specimen was not so carefully examined by me when alive; it *may* therefore possess, for instance, the vascular appendages of the dorsal vessel which I found wanting in all the examples which I did examine. Nor can I see any reason for explaining the differences in the sperm-duct as positively due to distention, or to immaturity or degeneration. But the fact that a similar variation occurs in the atrium of *Lumbriculus*, so nearly allied a genus, makes me unwilling to lay undue stress upon the varying sperm-duct of the present species, although I cannot recollect an analogous case\*. I prefer—at any rate, for the present—to leave the matter of the specific identity or non-identity of the series of examples described here as uncertain.

XXIX.—*Three new Mammals from Northern Rhodesia.*

By MARTIN A. C. HINTON.

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THAT famous collector Captain Guy C. Shortridge was attached for some considerable time to the air-station at N'dola, in Northern Rhodesia. As was to be expected, he made very good use of his opportunity, and his large collection of mammals has now arrived in the Museum. A

\* At any rate, a strictly analogous case. It will be recollected that in *Sutroa* (Beddard, Tr. Roy. Soc. Edinb. t. c.) one of the two pairs of sperm-ducts has a distinctly less calibre than the second.

full account of this collection will be published later, but meanwhile it is deemed advisable to publish descriptions of the following three new species:—

*Mimetillus thomasi*, sp. n.

*Type*.—An adult female, collected at N'dola on Oct. 4, 1919; original number 481.

This interesting bat, represented by a single specimen, is distinguished from its West-African relative, *M. moloneyi*, chiefly by its larger size, duller colour, and still flatter skull.

General outward appearance and all the essential characters of the genus as in *moloneyi*. Size larger, the forearm measuring 31 instead of 27–29 mm. Third digit of wing relatively a little longer, its total length equalling 165% (instead of 146–159%) of the length of the forearm. Fur on back slightly longer. General colour, above and below, dark brown, deepening almost to black on head, dull, lacking both the gloss and the deep chestnut tinge seen in *moloneyi*.

Skull considerably larger (condyle to canine 14·1, instead of 13 mm.), with the characteristic depression and flattening of the brain-case even more pronounced than in *moloneyi*; interorbital region relatively broader. Dentition without especial peculiarities.

*External measurements* (taken in flesh by collector).—Head and body 56 mm.; tail 38; hind foot 7·5; ear 13.

*Measurements of wing* (made on skin).—Forearm 31; third digit, total length 51, its metacarpal and phalanges 1 and 2 being respectively 32·5, 9, and 9·5; fifth digit 36, its metacarpal 29·5. Revilliod's index of width 49.

*Skull*.—Extreme length 14·6; condyle to canine 14·1; canine to  $m^3$  5·2; width of brain-case in mastoid region 9·5; median occipital depth 4·7; interorbital breadth 5·3; breadth across preorbital swellings 8; width across outer borders of  $m^2$ – $m^3$  7·8.

*Mimetillus moloneyi* was originally described from Lagos by Mr. Thomas. Many specimens were collected subsequently in Fernando Po; and we have lately received an example from Sierra Leone, collected by Mr. Willoughby P. Lowe. Hitherto no representative of the genus has been found inland or away from the West-African coast. Captain Shortridge's discovery in Rhodesia is therefore of considerable interest. I have great pleasure in naming the second species of this genus in honour of Mr. Oldfield Thomas, to whom I am indebted in so many ways.

*Kerivoula lucia*, sp. n.

*Type*.—An adult male collected at N'dola on Sept. 26, 1919; original number 472. No other specimen seen.

This species closely resembles *K. lanosa* in general appearance, but it is distinguished by its rather smaller size, smaller and less hairy ears, greyer colour, and by some characters of the skull.

Size small, forearm 30.5 mm. Fur on body and top of head very long, dense, and woolly, closely resembling that of *lanosa* in quality. Cheeks in front of ears nearly naked. Ears very sparingly haired on outer surface, nearly naked within. Forearm, thumb, and outer edge of dorsal surface of wing clothed with tufts of hair; upper surface of tibia, hind foot, and tail similarly clothed. Interfemoral membrane with tufts of hair along the veins on dorsal surface, similar but smaller tufts of hair on ventral surface; with a well-developed posterior fringe. Ears smaller than in *lanosa*, with a somewhat deeper, though narrower, lateral emargination towards the tip; tragus normal.

General colour of back between "sepia" and "dusky drab," passing to a light grey on top of head and muzzle. Dorsal hairs with slaty bases, mostly with long yellowish-brown tips; in many the tips are silvery, and these silver tips produce a quite conspicuous "lining" on the back and rump. Under surface silvery grey, darkened irregularly by the partly visible slaty bases of the hairs. Hairs on forearm, wings, legs, tail, and the upper surface of the interfemoral membrane yellowish; those on the ventral surface of the membrane are silver.

Skull about as large as that of *K. lanosa*, from which it is distinguished by its relatively narrower brain-case, more boldly convex frontal region, narrower rostrum, and more nearly parallel tooth-rows, the width between the outer borders of the last molars markedly less in proportion to the width across the canines. Dentition not essentially different. Outer upper incisor about three-fourths the height of inner incisor, rather stouter than the latter in cross-section, and with a well-developed internal basal cusp. Inner incisor with a posterior secondary cusp, the summit of which is a little less lofty than the outer incisor. Middle upper premolar smaller in cross-section than the anterior premolar.

*Collector's measurements* (taken on the flesh).—Head and body 39 mm.; tail 40; hind foot 6; ear 12.

*Wing-measurements* (from skin).—Forearm 30.5; third digit, total length 66, its metacarpal and phalanges 1 and 2 being respectively 32, 16, and 18; fifth digit 46.5, the metacarpal and phalanges being 30.5, 9, and 7.5.

*Skull measurements* (those of 7. 1. 1. 538, a cotype of *lanosa*, being added in parentheses for comparison).—Greatest length 13 (13.4); condyle to canine 11.5 (11.5); canine to *m*<sup>1</sup> 5.1 (5.2); width across canines

3 (3.2); width across outer borders of  $m^3$ - $m^3$  5.1 (5.5); zygomatic breadth 7.7 (7.9); interorbital breadth 3 (3); width of brain-case 6.6 (7.1).

This pretty little bat is named in honour of Miss Wilson, to whom I am indebted for much intelligent assistance.

*Zelotomys shortridgei*, sp. n.

*Type*.—An adult female collected at N'dola on June 30, 1919; original number 336. Five other specimens (♂, 47, 301, 392; ♀, 48, 248) examined.

This is a pallid species, differing widely in colour from *hildegardeae* and *instans*, the two species hitherto known, with a skull of somewhat intermediate form.

Size about as in the other species. Fur as long as in *hildegardeae*. General colour above near buffy brown, the middle line of back not specially darkened; flanks lighter greyish or yellowish brown. Under surface dirty white, the ventral hairs usually with slaty bases; but in one specimen (248, old ♀) these hairs are white to the roots. General ventral colour extending to lower cheeks and upper lip, but, owing to the relatively pallid dorsal colour, these parts are not so conspicuously contrasted with the rest of the face as in *hildegardeae*. Hands and feet dirty white. Tail almost naked, dirty white in colour; the short stiff hairs, which form its sparse clothing, pure white. Mammæ 3—2=10, as in the other species.

Skull agreeing in size and general form with those of the previously described species; as in *hildegardeae*, the greatest zygomatic breadth is behind the level of  $m^3$ , not in the centre of the arches as in *instans*. Bullæ decidedly smaller than in either of the other species. Cheek-teeth and incisors as heavy and robust as in *instans*, but upper incisors are not thrown quite so much forwards.

*Collector's measurements* of type (and those of ♀ 248 in parentheses).—Head and body 134 (137) mm.; tail 96 (105); hind foot 22 (22); ear 16 (16). The hind-foot measurement in females uniformly 22, but in the males (with head and body ranging between 120 and 127) it varies between 22.5 and 24.5.

*Skull* of type and no. 248 (in parentheses).—Condylar-basal length 30.7 (32.6); condylar-incisive length 31 (32.7); dental length 17.2 (17.1); diastema 8.7 (9.2); cheek-teeth on crowns 5.6 (4.8, but worn to stumps); zygomatic breadth 18 (18.2); interorbital breadth 4.5 (4.8); breadth of brain-case at glenoid region 13.2 (13.3).

This is a very well-marked species, which may be fittingly associated with the name of its discoverer, Capt. Guy C. Shortridge.